

In the Verdigris River Basin, rainfall amounts from April 13 to 19 ranged from 3.33 inches at Toronto, Kans., to 8.24 inches at Claremore, Okla. Precipitation over the Grand Lake area in Oklahoma from April 14 to 19, ranged from 7.62 inches at Jay to 10.44 inches at Spavinaw, while below Pensacola Dam stations reported amounts ranging from 2.51 inches at Sallisaw, Okla., to 10.4 inches at Pryor, Okla.

The crest stages for a few stations compared with the previous highest stages of record are as follows:

River and station	Flood stage	April 1941		Previous high	
		Crest	Date	Stage	Date
Bourbeuse River: Union, Mo.....	Feet 12	Feet 17.0	21	Feet 19.2	October 1919.
Meramec River:					
Sullivan, Mo.....	11	16.3	20	15.7	May 1937.
Pacific, Mo.....	11	20.0	22	30.8	August 1915.
Valley Park, Mo.....	14	21.6	23	30.7	October 1919.
Gasconade River: Jerome, Mo.....	15	22.3	21	28.6	August 1915.
Osage River:					
Osceola, Mo.....	20	29.8	21		
Lakeside, Mo.....	60	61.7	20	61.0	June 1937
St. Thomas, Mo.....	23	32.3	22	32.9	June 1935.
Verdigris River: Sageeyah, Okla.....	35	40.4	22	40.4	April 1929.
Neosho River:					
Parsons, Kans.....	22	24.8	17		
Oswego, Kans.....	17	22.3	17	25.4	April 1927.
Wyandotte, Okla.....	23	36.4	20	30.0	April 1912.
Fort Gibson, Okla.....	22	33.5	21	35.0	May 1908.
Arkansas River:					
Webbers Falls, Okla.....	23	31.3	21	33.6	April 1927.
Fort Smith, Ark.....	22	31.4	22	36.7	Do.

Red Basin.—The Red River at Fulton, Ark., and the Little and Sulphur Rivers draining into the Red River in that area exceeded flood stages near the close of the month. There had been frequent flooding in this section during the past few months and no further appreciable damage was caused during April.

The heavy rains in Arkansas during the month resulted in a rise in the upper Ouachita River causing some flooding in the vicinity of Camden, Ark. Damages amounting to \$11,000, mostly to prospective crops, were reported.

West Gulf of Mexico drainage.—The Trinity River overflowed its banks at Dallas, Tex., twice during the month, reaching the same crest stage (30.7 feet) on both April 20 and 24. The overflow at Dallas was not serious, but at Trinidad, Tex., several hundred acres of bottom land were flooded. Livestock were removed on the basis of flood warnings.

A flash flood occurred on the Bosque River at Hico, Tex., on April 17 and 18, causing damage amounting to about \$4,500.

The Guadalupe and Nueces Rivers were above flood stage at the end of the month. A report will be made on these floods in the next issue of the REVIEW.

Excessive rains caused the Pecos River to reach flood stage at Artesia, N. Mex., on April 29. Some lowlands were flooded below Artesia but no damage of importance occurred. However, there was about \$5,000 damage to approaches to bridges by flash floods in tributary streams to the Pecos River in the vicinity of Roswell, N. Mex.

The Rio Grande had approached flood stage at Albuquerque, N. Mex., at the close of the month.

Colorado River Basin.—Heavy rain over the Verde River

Basin on April 11 produced some high water in the Verde and Salt Rivers. The flow in the Verde is controlled by Bartlett Dam and the peak stage in the Salt River was held to 4.8 feet at Phoenix, Ariz., on April 14. A radio range site located on low ground near the Salt River sustained considerable damage, the extent of which is not known at this time.

Pacific Slope drainage.—Owing to an abnormally wet winter season discharge in Tulare Lake drainage continued much above normal and surplus water not needed for irrigation continued to flow into the Tulare Lake Basin.

Rain was heavy over the upper Sacramento Basin on March 30, when 4.1 inches occurred at Vollmers, Calif. On April 4 excessive rain was again general with another 4.3 inches at Vollmers, and 3.96 inches at Kennett, Calif., in 24 hours.

The Sacramento River crested at Kennett at 19.7 feet and at Red Bluff, Calif., at 26.2 feet on April 4. These stages were higher than for previous floods this season. The Feather and American Rivers were only moderately high and no important rise occurred in the lower San Joaquin. Many of the local creeks caused overflow damage from the rains of April 4 which were especially heavy in the valley and the adjacent foothills.

At Knights Landing, Calif., with a crest stage of 30.9 feet on April 7, there was an overflow into Yolo Bypass. This overflow, together with a heavy discharge of Cache and Putah Creeks materially increased the volume of water in the bypass. This bypass and also Butte Basin and Sutter Bypass have been flooded since December 1940. In some of the areas the water had been pumped or drained out in March. The reflooding in April resulted in further delay in crop planting.

The total losses from the flooding during April have been estimated to be over \$250,000.

ESTIMATED FLOOD LOSSES AND SAVINGS FOR APRIL 1941

River and drainage	Tangible property	Matured crops	Prospective crops	Livestock and other movable farm property	Suspension of business	Total losses	Total reported savings
East Gulf of Mexico: Pearl River.....					\$1,000	\$1,000	\$1,000
Mississippi System—Upper Mississippi Basin:							
Chippewa River.....	\$1,000					1,000	
Upper Mississippi River.....	48,000		\$1,000	\$10,000	2,000	61,000	5,000
Missouri Basin: Lower Missouri River and tributaries ¹	100,000					100,000	3,500
Ohio Basin: Black and Orchard Creeks ²	100		2,050			2,150	
White Basin: White River.....	3,200	800	38,200	400	10,000	52,600	15,000
Arkansas Basin:							
Neosho River in Kansas.....	15,000		1,600	200		16,800	
Marmaton River.....	1,500		1,600	3,000	1,000	7,100	
Lower Neosho and Arkansas Rivers.....	3,000	5,000	320,000	1,000	10,000	339,000	190,000
Streams in southwest Missouri.....						\$1,000,000	
Red Basin: Ouachita River.....	250		10,000	250	500	11,000	11,000
West Gulf of Mexico: Pecos River.....	5,000					5,000	
Pacific Slope: Sacramento River.....	141,300	10,600	110,000	1,000		262,900	5,000

¹ Mainly Osage River and lower Missouri River from Jefferson City to Hermann, Mo.

² Tributaries of Tennessee River in vicinity of Rockwood, Tenn.

³ From Press reports; 6 lives lost.